



## We claim:

listing.

- 1. A computer implemented system for analyzing results of a predictive model applied to a data pertaining to a plurality of entities, the method comprising:
  - a predictive model that scores the entities and provides a rank ordered listing of at least some of the entities, and at least one reason for each listed entity; and for each reason, a report tree hyperlinked to the reason and containing a plurality of hyperlinked reports, including at least one summary level report providing a summary of data contributing to the reason the entity is included in the rank ordered
- 2. A computer implemented method of analyzing results of a predictive model applied to a data pertaining to a plurality of entities, the method comprising:

providing a predictive model for scoring the entities;

displaying a rank ordering at least some of the entities according to their scores; and for each of the displayed entities, providing a hyperlink to a report tree containing a plurality of hyperlinked reports, including at least one summary report providing a quantitative summary of data contributing to a reason the entity is included in the rank ordered listing.

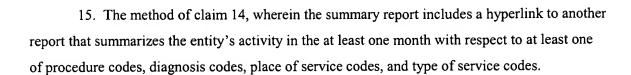
- 3. The method of claim 2, wherein the report tree contains a plurality of reports comprising:
  - a suspect list of entities identified by the predictive model;
  - a breakdown report of each entity's activity by a selected categorization of the entity's activity, the breakdown report linked to the entity in the suspect list;
  - a distribution chart linked from the breakdown comparing activity of the entity to activity of the entity's peers;
  - a first subset report linked to the breakdown report showing the breakdown of the entity's activity by at least one of age or gender of other entities which interact with the entity;

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- a second subset report linked to the first distribution report showing the breakdown of the entity's activity by at least one of age or gender of other entities which interact with the entity;
- a tabular report, linked to at least one of the breakdown report, the distribution chart, the first subset report or the second subset report, showing activity of the entity with respect to a selected categorization of the entity's activity;
- a interacting entity summary report linked to the breakdown report showing a summary of activities of the entity with respect to each other entity which interacts with the entity;
- a comparison report linked to at least one of the previous reports, comparing activity of the entity for at least one other entity with activity of the entity's peers for the same at least one other entity; and
- a report linked to at least one previous report, providing a listing of individual activities of an entity with respect to a selected categorization of the entity's activities.
- 4. The method of claim 3, wherein the other entities are clients of the entity.
- 5. The method of claim 2, wherein the report tree contains a plurality of reports comprising:
  - a suspect list report including a plurality of entities scored by the predictive model;
  - at least one entity-based report, linked to an individual entity in the suspect list, and providing a comparison of the individual entity's activity with respect to activity of the entity's peers;
  - at least one entity-subset report, linked an entity-based report, and providing a breakdown of the entity's activity by a selected category;
  - at least one entity to other entity report, linked to an entity-based report, and providing a breakdown of an entity's activity with respect to each other entity which interacts with the entity; and
  - at least one detail report, linked to at least one previous report, and providing a listing of activities that pertain to the report to which the detail report is linked.
- 6. The method of claim 2, wherein the predictive model is for identifying suspicious entities based on transactions associated with the entities.

- 7. The method of claim 2, wherein the entities include at least one entity that is derived from multiple entities that interact with each other.
- 8. The method of claim 2, wherein a reason for including an entity in the rank ordered listing is suspicious activity of the entity, and the report tree includes a summary report providing a summary of activity of the entity.
- 9. The method of claim 8, wherein an entity is included in the rank ordered listing if the entity's activities are suspicious relative to the activities of the entity's peers.
- 10. The method of claim 2, wherein the entities are healthcare entities and the predictive model is for identifying suspicious healthcare entities from data including healthcare procedure reimbursement transactions associated with the entities.
- 11. The method of claim 10, wherein the summary report compares activity of the entity to activity of the entity's' peers with respect to at least one of following:
  - a selected set of procedure code groups;
  - a selected set of diagnosis code groups;
  - a selected set of type of service codes; and
  - a selected set of place of service codes.
- 12. The method of claim 10, wherein the summary report compares activity of the entity to activity of the entity's' peers with respect to an individual client of the entity.
- 13. The method of claim 10, wherein the summary report compares activity of the entity in each of a plurality of age groups of the entity's clients to the activities of the entity's peers in each of the age groups.
- 14. The method of claim 10, wherein the summary report compares activity of the entity in at least one month to activity of the entity's peers in the at least one month.



- 16. The method of claim 10, wherein the summary report compares client consecutive visits of the entity for a selected period of time to client consecutive visits of the entity's peers in the selected period of time.
- 17. The method of claim 10, wherein the summary report compares average dollars per claim for the entity with average dollars per claim for the entity's peers.
- 18. The method of claim 17, wherein the summary report includes a hyperlink to a report providing a distribution of dollars per claim for the entity.
- 19. The method of claim 10, wherein the summary report compares per day activity of the entity with per day activity of the entity's peers.
- 20. The method of claim 19, wherein the per activity is measured by at least one of the following:

dollars paid per client per day; number of services per client per day; number of clients per day; dollars paid per day; number of claims per day.

21. The method of claim 19, wherein the per activity is limited by at least one of the following:

procedure codes; diagnosis codes; type of services codes; and place of service codes.

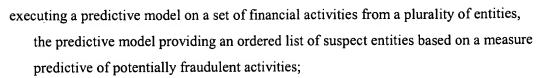
- 22. The method of claim 10, wherein the summary report compares the per client volume of activity of the entity with the entity's peers.
- 23. The method of claim 22, wherein the per client volume of activity is measured by at least one of the following:

dollars paid per client;
number of clients;
number of services per client;
dollars paid to the entity per client;
number of services provided by the entity per client.

24. The method of claim 22, wherein the per client volume of activity is limited by at least one of the following:

procedure codes; diagnosis codes; type of services codes; and place of service codes.

- 25. The method of claim 22, wherein the summary report includes a hyperlink to a report of activity volume for each of the entity's clients, sorted according to a measure of the activity volume per client.
- 26. The method of claim 10, wherein the summary report compares the number of multiple entities seen per day by the entity's clients to the number of multiple entities seen per day by the clients of the entity's peers.
- 27. The method of claim 10, wherein the healthcare entities are selected from a set consisting of: healthcare providers, patients, claims processors, doctors, hospitals, nursing facilities, practice groups, laboratories, and pharmacies, and interacting combinations of any of the foregoing entities.
- 28. A computer assisted method of identifying potentially fraudulent financial activity, the method comprising:



selecting a entity on the ordered list;

navigating, by selection of hyperlinks, a report tree containing a hierarchy of reports, each report hyperlinked to at least one other report, and containing

- i) at least one summary report of a entity's activities in a one of a selected time period, activity category, or age group; and
- ii) at least one detailed report containing a number of activities of the entity in at least one selected time period, activity a category, age group, or individual client;

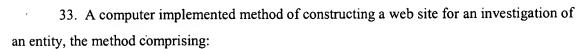
identifying in at least one summary report a set of activities of the entity that are suspicious; and

identifying in at least one detailed report, individual activities of the entity that are potentially fraudulent.

29. The method of claim 28, further comprising:

in conjunction with at least one of the identifying steps, opening a new case in a case management system, the new case containing the entity as a suspect for further investigation.

- 30. The method of claim 28, further comprising:
- in conjunction with at least one of the identifying steps, copying the report into a casebook containing a plurality of reports with respect to a specific entity being investigated, the casebook accessible to a plurality of users via a web browser.
- 31. The method of claim 28, wherein the entities are healthcare entities, and the financial activities include claims for reimbursement.
- 32. The method of claim 28, wherein at least one summary report of a entity's activities compares the entity's activities relative to the entity's peers.



executing a model on a set of activity data from a plurality of entities, the model providing an ordered list of suspect entities based on their activity; selecting an entity on the ordered list;

navigating, by selection of hyperlinks, a report tree containing a hierarchy of reports, each report hyperlinked to at least one other report, and containing at least one summary report of the selected entity's activity in a selected time period; and selecting ones of the reports to include in a web site, each of the selected reports hyperlinked from a title of the report on a main page of the web site.

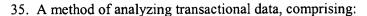
34. A computer implemented method of analyzing results of a predictive model applied to a data set pertaining to transactions of a plurality of entities, the method comprising:

executing a predictive model on the data set to select from the entities, a suspect list containing a plurality of suspects, the suspects rank ordered according to their predictive model scores, each suspect associated with a list of reasons generated by the predictive model for including the suspect in the suspect list, the reasons for each suspect rank ordered by their influence on the suspect's predictive model score, the reasons selected from a predetermined set of reasons;

for each reason, providing a hyperlink to a report tree comprising a plurality of predetermined hyperlinked reports, arranged by their hyperlinks to provide access from the reason in the suspect list to at least one summary report providing a summary analysis of data related to the reason and the suspect, at least one summary report hyperlinked directly or indirectly to at least one detail report containing a list of specific transactions which contribute to the inclusion of the suspect in the suspect list;

receiving a user input selecting for one a suspect from the suspect list a hyperlinked reason in the list of reasons associated with the suspect, and in response, generating from the report tree for the selected reason, a summary report providing the summary analysis of the transactions related to the selected reason and suspect; and responsive to user input selecting a hyperlink to one of the detail reports, generating the selected detailed report from the transactions associated with suspect.

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- providing a report tree comprising a plurality of predetermined reports hierarchically arranged to include a root report containing a plurality of report reasons, each reason descriptive of a transaction pattern, and linked to branch containing a summary report providing a summary of selected transactions associated with the transaction pattern, and a predetermined set of reports that provide further, lower level data specific to transactions contained in the report or entities associated the transaction pattern, at least one branch terminating in at least one report containing transaction details;
- receiving a user request to process a set of transactions with a detection model to detect patterns of transactions;
- receiving a user input select at least one report reason in the root report and in response, generating a summary report containing the summary of transactions associated with the transaction pattern; and
- responsive to user inputs to select one or more of the predetermined reports, generating the selected report from the transactions associated with the transaction pattern.
- 36. A user interface for a computer program product, comprising
- a main menu frame containing a plurality of menu tabs, each menu tab for invoking a function of the computer program product, the menu tabs continuously available when the invoked functions are provided;
- a display frame for displaying content information to the user, including reports derived from data contained in a database;
- a context menu frame containing a plurality of functions, the contained functions dynamically and automatically selected in response to the content information displayed in the display frame, and responsive to the display frame containing a report, the context menu frame including functions for manipulating data contained in the report; and
- a navigation frame for containing a variable number of icons, each icon providing a link to a report previously viewed in the display frame, the icons in the navigation frame automatically updated to include additional icons as additional reports are viewed in the display frame.



- 37. A system for analyzing activities of entities, the system comprising:
- a data source including activity data for a plurality of entities;
- a predictive model communicatively coupled to the data source that executes on the activity data, and generates an ordered list of suspect entities, the ordered list of entities selected based on their predictive model scores; and
- a report tree containing a hierarchy of predetermined reports, each report hyperlinked to at least one other report, and containing at least one summary report of a selected entity's activity in a selected time period, a report applied to selected activity data of the selected entity in response to the report being accessed in the report tree.
- 38. A computer implemented method of analyzing activity of an entity, the method comprising:
  - displaying a first report comparing activity of the entity with respect to activity of a first peer group of the entity;
  - receiving a user selection of a second peer group of the entity; and
  - displaying a second report comparing activity of the entity with respect to activity of the second peer group of the entity.
- 39. The method of claim 38, wherein one peer group is determined from peer group identification data provided by each entity, and the other peer group is determined based on a data-driven analysis of activity data of the entity.
- 40. A computer system for investigating activities of entities, the program product comprising:
  - a data source for providing activity data for a plurality of entities;
  - a predictive model communicatively coupled to read activity data from the data source, and to generate an ordered list of suspect entities;
  - a report tree containing a plurality of hyperlinked reports, at least one report for selectively summarizing activity data of a selected entity with respect to the entity's peers; and
  - a case management module coupled to the database and the report tree, for assigning, managing and updating cases, each case associated with a selected entity, and containing user selected reports from the report tree.